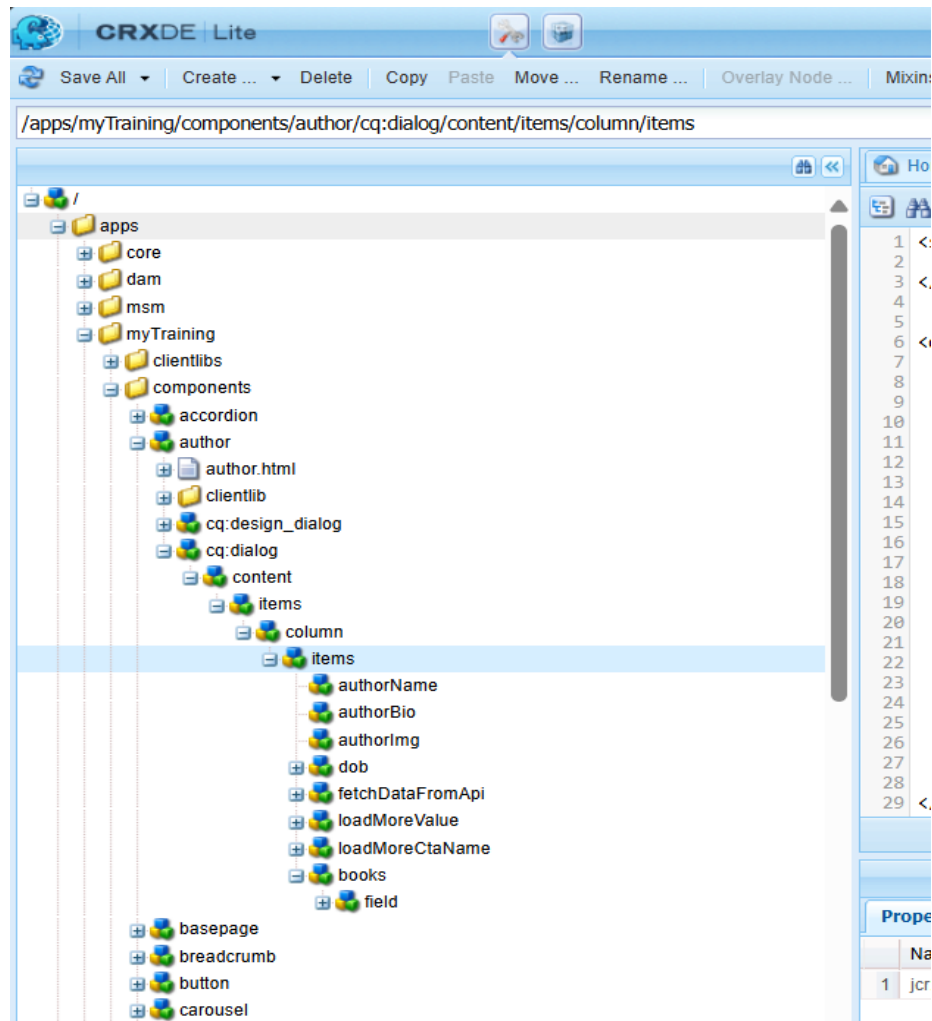
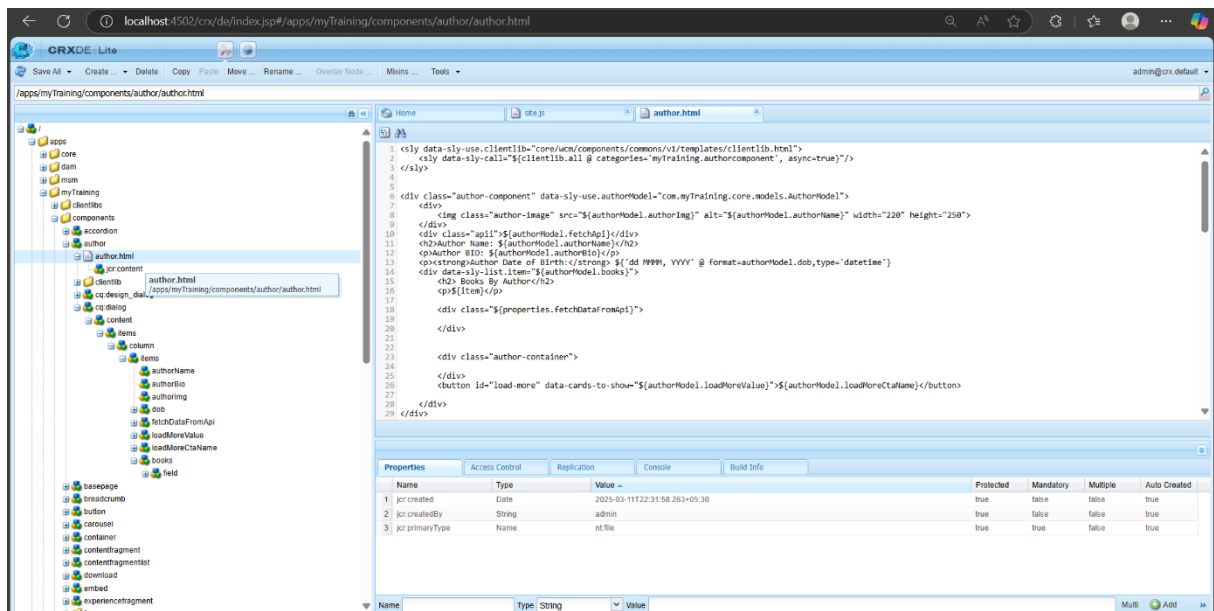


AEM TASK – DAY 6

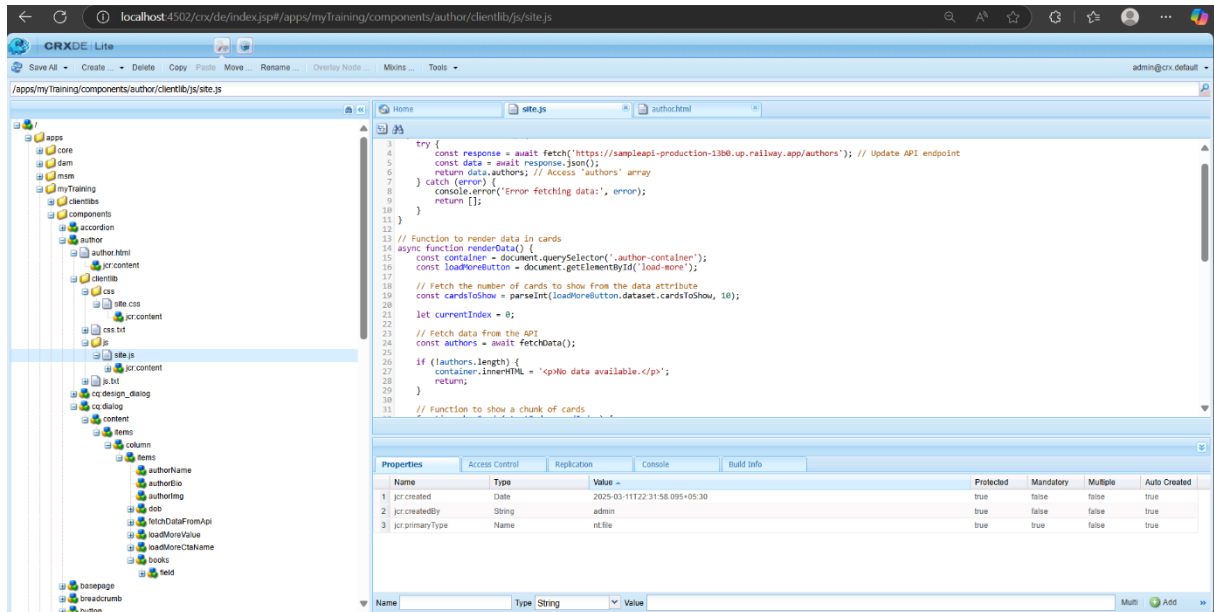
- **Developing an author component to retrieve card details :**



- The HTML file displays book cards containing details such as an image, title, description, and publication date :

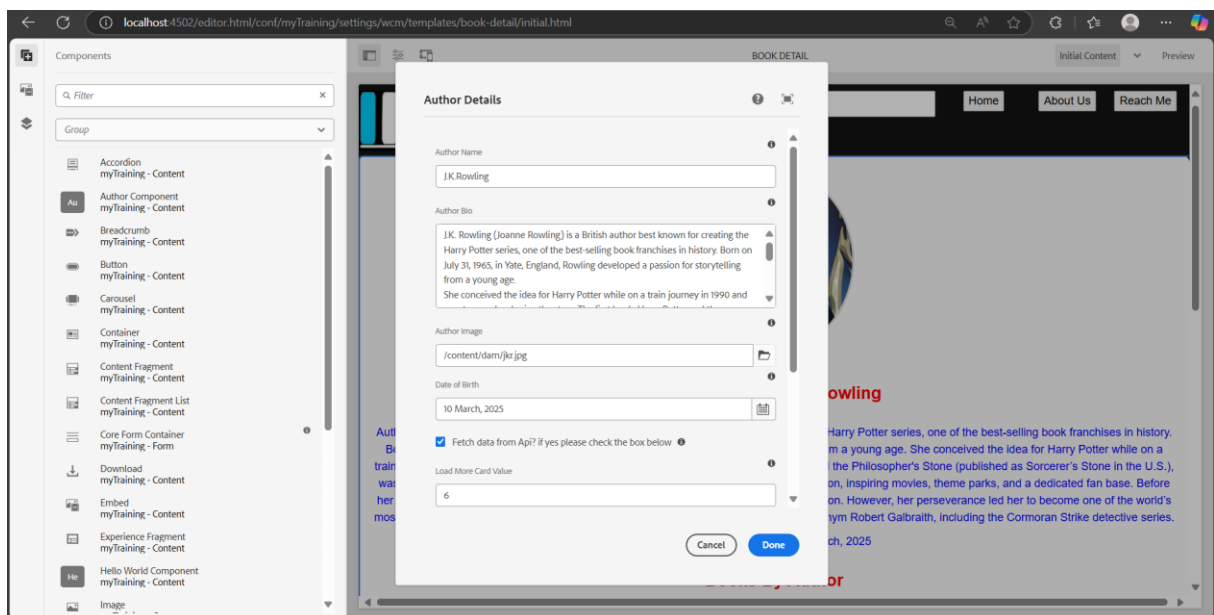


- Adding site.js in the clientlibs folder to fetch data from the API URL :

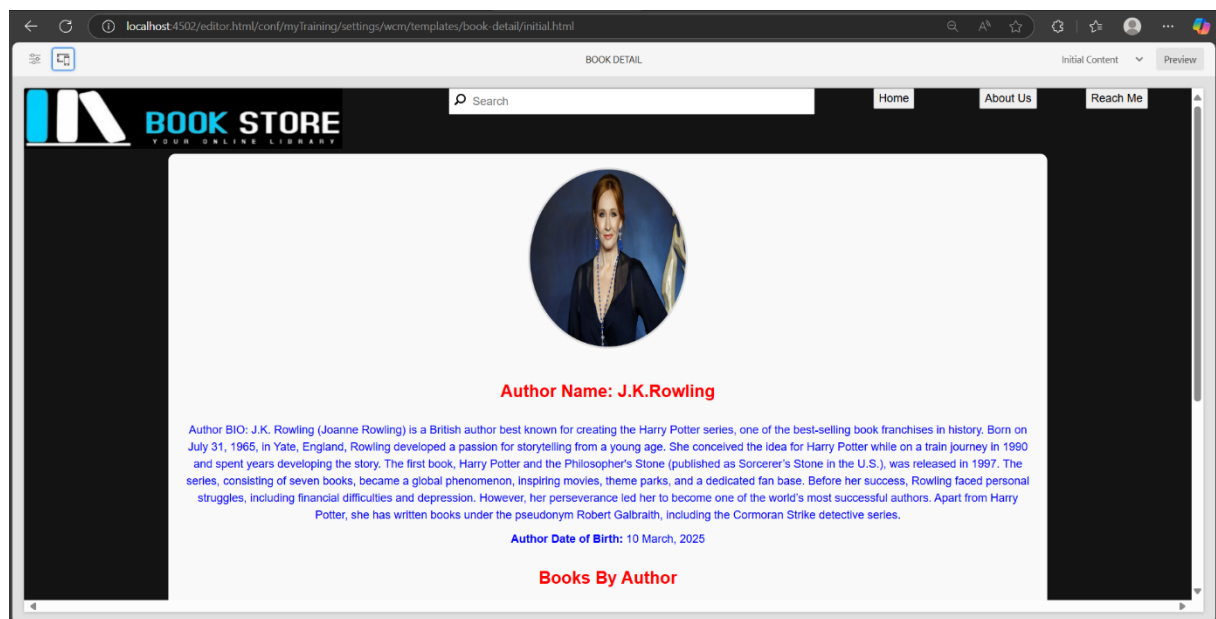


- Author component within the template:

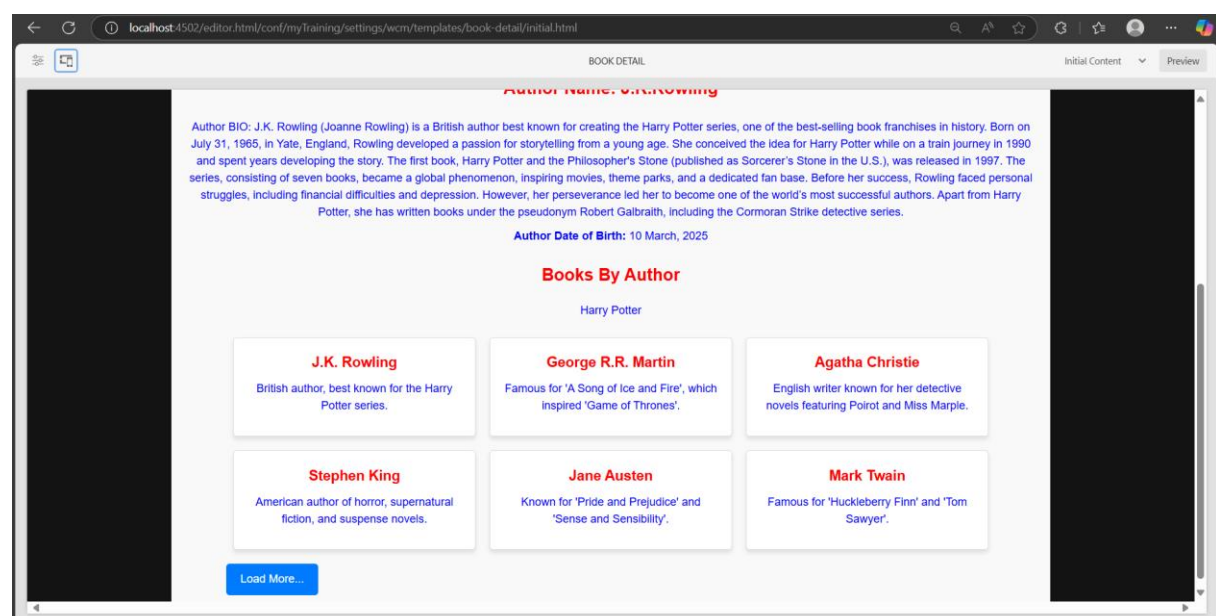
The following author component includes details such as the author's name, author's bio, date of birth, and a checkbox for fetching data via an API.

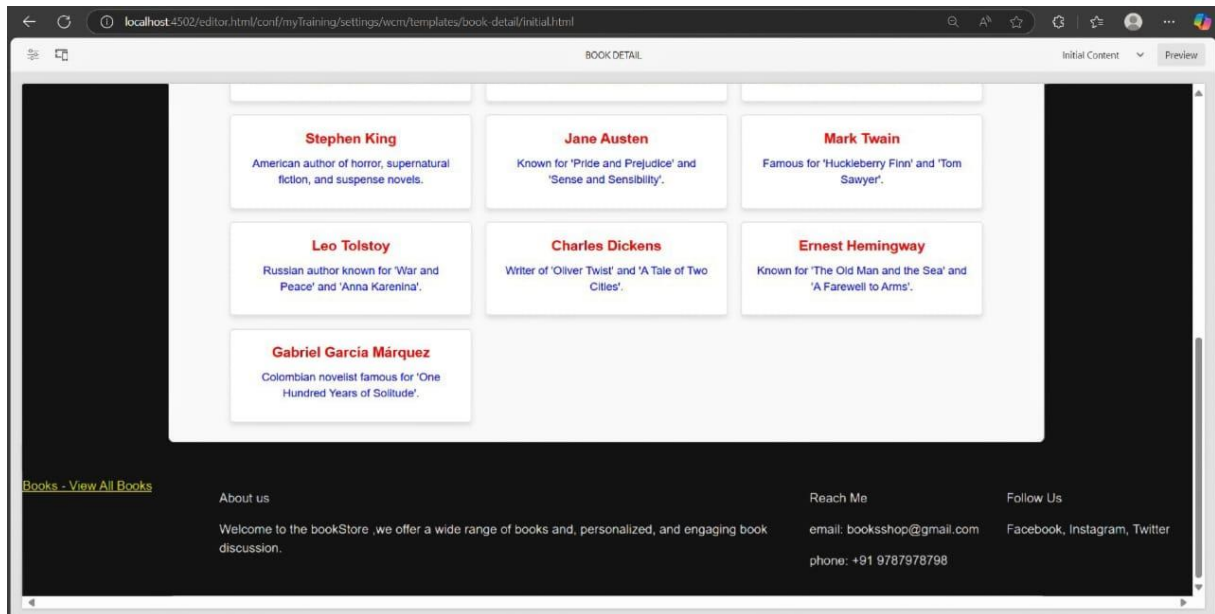


- The author card displays details including their name and biography :

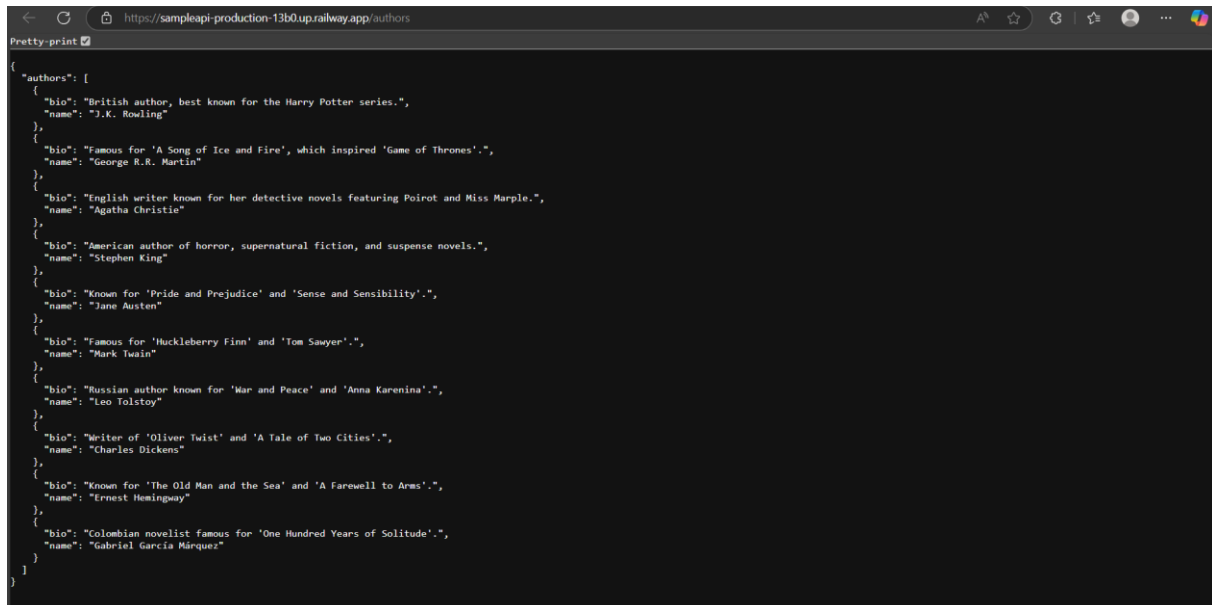


- When we click "Load More," additional data is fetched from the API if available :





- Used a custom API to retrieve data for AEM :



- The AuthorModel file has been modified to retrieve details from the API :

```

1 package com.myTraining.core.models.impl;
2
3 import com.myTraining.core.models.AuthorModel;
4 import com.myTraining.core.services.CustomConfig;
5 import com.myTraining.core.services.CustomServiceInt;
6 import org.apache.sling.api.SlingHttpServletRequest;
7 import org.apache.sling.api.resource.Resource;
8 import org.apache.sling.models.annotations.Model;
9 import org.apache.sling.models.annotations.injectorspecific.OSGiService;
10 import org.apache.sling.models.annotations.injectorspecific.ValueMapValue;
11 import org.osgi.service.component.annotations.Reference;
12 import org.slf4j.Logger;
13 import org.slf4j.LoggerFactory;
14
15 import javax.annotation.PostConstruct;
16 import java.util.ArrayList;
17 import java.util.Collections;
18 import java.util.Date;
19 import java.util.List;
20
21 @Model(adaptables = SlingHttpServletRequest.class, adapters = AuthorModel.class)
22 public class AuthorModelImpl implements AuthorModel {
23
24     private static final Logger LOG = LoggerFactory.getLogger(AuthorModelImpl.class);
25
26
27
28     @ValueMapValue
29     private String authorName;
30
31     @ValueMapValue
32     private String authorBio;
33
34     @ValueMapValue
35     private String authorId;
36
37     @ValueMapValue
38     private String authorApi;
39
40     @ValueMapValue
41     private String userName;
42
43     @ValueMapValue
44     private String userPassword;
45
46     @PostConstruct
47     public void postConstruct() {
48         // Retrieve author details from the API
49         CustomConfig config = CustomConfig.getInstance();
50         CustomServiceInt service = CustomServiceInt.getInstance();
51
52         // Example: Retrieve author name
53         String authorName = service.getAuthorName(authorId);
54         // Example: Retrieve author bio
55         String authorBio = service.getAuthorBio(authorId);
56         // Example: Retrieve author API
57         String authorApi = service.getAuthorApi(authorId);
58         // Example: Retrieve user name
59         String userName = service.getUserName(authorId);
60         // Example: Retrieve user password
61         String userPassword = service.getUserPassword(authorId);
62
63         // Set the retrieved values to the instance variables
64         this.authorName = authorName;
65         this.authorBio = authorBio;
66         this.authorId = authorId;
67         this.authorApi = authorApi;
68         this.userName = userName;
69         this.userPassword = userPassword;
70     }
71
72     // Implement the methods of the AuthorModel interface
73     public String getAuthorName() {
74         return authorName;
75     }
76
77     public String getAuthorBio() {
78         return authorBio;
79     }
80
81     public String getAuthorId() {
82         return authorId;
83     }
84
85     public String getAuthorApi() {
86         return authorApi;
87     }
88
89     public String getUserName() {
90         return userName;
91     }
92
93     public String getUserPassword() {
94         return userPassword;
95     }
96 }

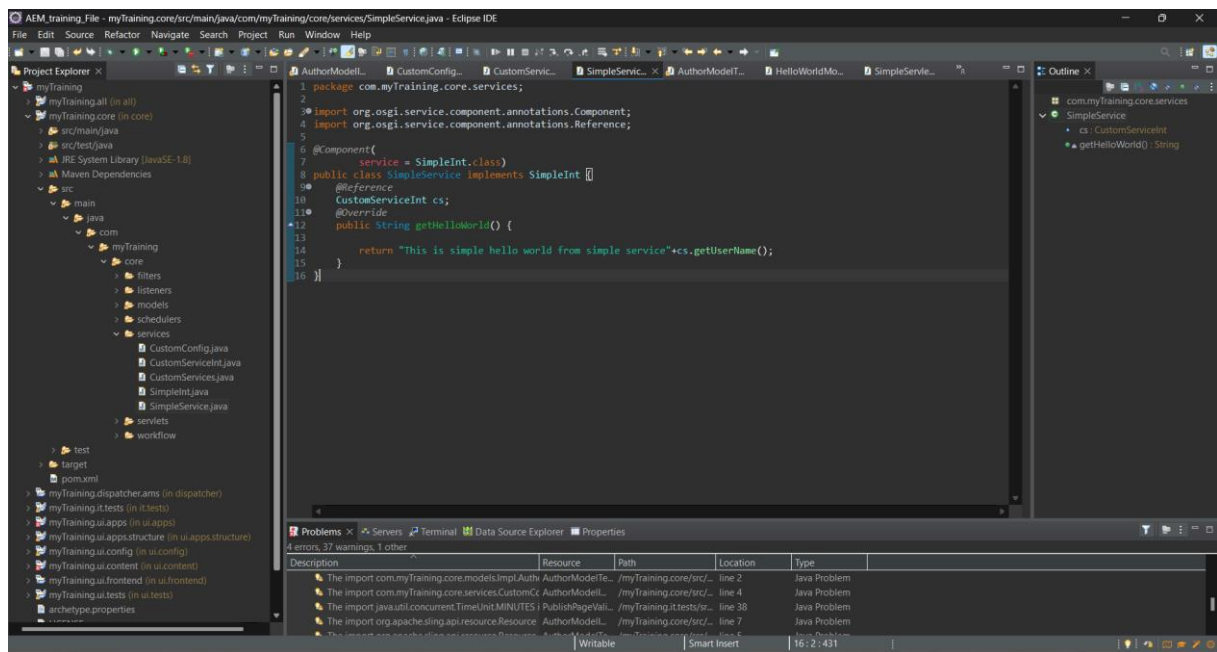
```

- The modified services include:

```

1 package com.myTraining.core.services;
2
3 import org.osgi.service.metatype.annotations.AttributeDefinition;
4 import org.osgi.service.metatype.annotations.ObjectClassDefinition;
5
6 @ObjectClassDefinition(name = "Custom Service Configuration 123", description = "Service Configuration")
7 public @interface CustomConfig {
8
9     @AttributeDefinition(name = "Author Id", description = "Author id")
10     String getAuthorId();
11
12     @AttributeDefinition(name = "Author Api", description = "Author Api")
13     String getAuthorApi();
14
15     @AttributeDefinition(name = "User Name", description = "User Name")
16     String getUserName();
17
18     @AttributeDefinition(name = "User Password", description = "User Password")
19     String getUserPassword();
20
21 }

```



- The modified servlets include :

```

36 private QueryBuilder queryBuilder;
37
38 @Override
39 protected void doGet(SlingHttpServletRequest request, SlingHttpServletResponse response) throws ServletException, IOException {
40     response.setContentType("application/json");
41     response.setCharacterEncoding("UTF-8");
42
43     String searchText = request.getParameter("searchText");
44     String searchPath = request.getParameter("searchPath");
45     JSONObject jsonResponse = new JSONObject();
46     JSONArray resultsArray = new JSONArray();
47
48     if (StringUtils.isBlank(searchText)) {
49         try {
50             jsonResponse.put("error", "Missing searchText parameter");
51         } catch (JSONException e) {
52             throw new RuntimeException(e);
53         }
54         response.getWriter().write(jsonResponse.toString());
55         return;
56     }
57
58     Session session = request.getResourceResolver().adaptTo(Session.class);
59     if (session == null) {
60         try {
61             jsonResponse.put("error", "JCR Session is null");
62         } catch (JSONException e) {
63             throw new RuntimeException(e);
64         }
65         response.getWriter().write(jsonResponse.toString());
66         return;
67     }
68
69     try {

```

Problems: 4 errors, 38 warnings, 1 other

Description	Resource	Path	Location	Type
The import com.my.training.core.models.impl.Auth: AuthorModelTe...	/myTraining/core/src/...	line 2	Java Problem	
The import com.my.training.core.services.CustomCc: AuthorModel...	/myTraining/core/src/...	line 4	Java Problem	
The import java.util.concurrent.TimeUnit.MINUTES: PublishPageVal...	/myTraining/core/src/...	line 38	Java Problem	
The import org.apache.sling.api.resource.Resource: AuthorModel...	/myTraining/core/src/...	line 7	Java Problem	

```

43 @Component(service = { Servlet.class })
44 @SlingServletResourceTypes({
45     resourceTypes="myTraining/components/basepage",
46     methods="HTTP_GET",
47     extensions="text"
48 })
49 @ServiceDescription("Simple Demo Servlet")
50 public class SimpleServlet extends SlingSafeMethodsServlet {
51
52     @Reference
53     SimpleInt si;
54
55     private static final long serialVersionUID = 1L;
56     private final Logger logger = LoggerFactory.getLogger(SimpleServlet.class);
57
58     @Override
59     protected void doGet(SlingHttpServletRequest req,
60         SlingHttpServletResponse resp) throws ServletException, IOException {
61         String helloWorld = si.getHelloWorld();
62         final Resource resource = req.getResource();
63         logger.info("-----inside doGet method by resource type servlet method: and hello world---");
64
65         String str = si.getHelloWorld();
66         resp.setContentType("text/plain");
67         resp.getWriter().write("title = " + resource.getValueMap().get(JcrConstants.JCR_TITLE));
68         logger.info("-----inside resource type servlet---");
69         resp.getWriter().write("hello service" + str);
70     }

```

Problems: 4 errors, 38 warnings, 1 other

Description	Resource	Path	Location	Type
The import com.my.training.core.models.impl.Auth: AuthorModelTe...	/myTraining/core/src/...	line 2	Java Problem	
The import com.my.training.core.services.CustomCc: AuthorModel...	/myTraining/core/src/...	line 4	Java Problem	
The import java.util.concurrent.TimeUnit.MINUTES: PublishPageVal...	/myTraining/core/src/...	line 38	Java Problem	
The import org.apache.sling.api.resource.Resource: AuthorModel...	/myTraining/core/src/...	line 7	Java Problem	

```

28 private static final Logger logger = LoggerFactory.getLogger(PageSQLIndexSearchServlet.class);
29 private static final String SEARCH_PATH = "/content/myTraining/us";
30
31 @Override
32 protected void doGet(SlingHttpServletRequest request, SlingHttpServletResponse response) throws IOException {
33     response.setContentType("application/json");
34     response.setCharacterEncoding("UTF-8");
35
36     String searchText = Optional.ofNullable(request.getParameter("searchText")).orElse("").trim();
37     logger.info("Searching for pages with text: {}, searchText");
38
39     JSONArray resultsArray = new JSONArray();
40     JSONObject jsonResponse = new JSONObject();
41
42     if (searchText.isEmpty()) {
43         try {
44             jsonResponse.put("error", "Missing searchText parameter");
45         } catch (JSONException e) {
46             throw new RuntimeException(e);
47         }
48         response.getWriter().write(jsonResponse.toString());
49         return;
50     }
51
52     // Get JCR Session
53     Session session = request.getResourceResolver().adaptTo(Session.class);
54     if (session == null) {
55         try {
56             jsonResponse.put("error", "JCR Session is null");
57         } catch (JSONException e) {
58             throw new RuntimeException(e);
59         }
60         response.getWriter().write(jsonResponse.toString());
61         return;

```

Problems: 4 errors, 39 warnings, 1 other

Description	Resource	Path	Location	Type
The import com.my.training.core.models.impl.Auth: AuthorModelTe...	/myTraining/core/src/...	line 2	Java Problem	
The import com.my.training.core.services.CustomCc: AuthorModel...	/myTraining/core/src/...	line 4	Java Problem	
The import java.util.concurrent.TimeUnit.MINUTES: PublishPageVal...	/myTraining/core/src/...	line 38	Java Problem	
The import org.apache.sling.api.resource.Resource: AuthorModel...	/myTraining/core/src/...	line 7	Java Problem	

- The test codes for the models and the servlet :

```

1 import org.junit.jupiter.api.extension.ExtendWith;
2 import org.mockito.junit.jupiter.MockitoExtension;
3 import static org.junit.jupiter.api.Assertions.*;
4
5 @ExtendWith({AemContextExtension.class, MockitoExtension.class})
6 class AuthorModelTest {
7
8     private final AemContext aemContext = new AemContext();
9     private AuthorModel authorModel;
10
11     @BeforeEach
12     void setUp() {
13         aemContext.addModelsForClasses(AuthorModel.class);
14         // aemContext.load().json("/resource/com/myTraining/core/models/Author.json", "/author");
15     }
16
17     @Test
18     void getBooks() {
19         String books = "history";
20         assertEquals("history", books);
21     }
22
23     @Test
24     void getAuthorBio() {
25         String authorBio = "authorBio";
26         assertEquals("authorBio", authorBio);
27     }
28
29     @Test
30     void getAuthorName() {
31         String authorName = "authorName";
32         assertEquals("authorName", authorName);
33     }
34 }

```

Problems: 4 errors, 39 warnings, 1 other

Description	Resource	Path	Location	Type
The import com.myTraining.core.models.impl.Auth...	/myTraining/core/src/...	line 2	Java Problem	
The import com.myTraining.core.services.CustomC...	/myTraining/core/src/...	line 4	Java Problem	
The import java.util.concurrent.TimeUnit.MINUTE...	/myTraining/core/src/...	line 38	Java Problem	
The import org.apache.sling.api.resource.Resource...	/myTraining/core/src/...	line 7	Java Problem	

```

18 @ExtendWith({AemContextExtension.class})
19 class SimpleServletTest {
20
21     private final AemContext context = new AemContext();
22     private SimpleServlet fixture;
23
24     @BeforeEach
25     void setUp() {
26         // Mocking SimpleServlet service
27         SimpleInt simpleIntMock = mock(SimpleInt.class);
28         when(simpleIntMock.getId()).thenReturn("Mocked Hello World");
29
30         // Register the mock service with the context
31         context.registerService(SimpleInt.class, simpleIntMock);
32
33         // Adapt the servlet from the context to ensure service injection works
34         fixture = context.registerInjectActivateService(new SimpleServlet());
35     }
36
37     @Test
38     void doGet() throws ServletException, IOException {
39         context.build().resource("/content/test", "jcr:title", "resource title").commit();
40         context.currentResource("/content/test");
41
42         MockSlingHttpServletRequest request = context.request();
43         MockSlingHttpServletResponse response = context.response();
44
45         fixture.doGet(request, response);
46
47         String output = response.getOutputStream().toString();
48         assertEquals("Title = resource titlehello serviceMocked Hello World", output.trim());
49     }
50 }

```

Problems: 4 errors, 39 warnings, 1 other

Description	Resource	Path	Location	Type
The import com.myTraining.core.models.impl.Auth...	/myTraining/core/src/...	line 2	Java Problem	
The import com.myTraining.core.services.CustomC...	/myTraining/core/src/...	line 4	Java Problem	
The import java.util.concurrent.TimeUnit.MINUTE...	/myTraining/core/src/...	line 38	Java Problem	
The import org.apache.sling.api.resource.Resource...	/myTraining/core/src/...	line 7	Java Problem	

